

THE ATHERTON LOCAL BOARD OF HEALTH.

ANNUAL REPORT of the Medical Officer of Health for 1893.

MR. CHAIRMAN AND GENTLEMEN,
I have now the honour of laying before you my Annual Report for the year 1893.

Population and Area of the District.—The population of the district for 1893 has been estimated at 16,300, and I have arranged the district into four divisions, to which the population has been apportioned as follows:—Chowbent, 9,200; Hindsford, 2,800; Leigh End, 2,500; and Howebridge, 1,800, respectively. The area of the district in acres is 2,426, and in square miles 3.79. This gives a population of 6.7 to the acre, and 4,300 to the square mile.

Birth-rate.—The total number of births registered during the year was 656, of which 340 were males and 316 females. This gives a birth-rate of 40.2 per 1,000 of the population, which is slightly below that of the two previous years; the birth-rates for these years being, for 1891, 41.07; and for 1892, 40.37 per 1,000 respectively.

Death-rate.—During the year 382 deaths were registered as having occurred within the district, including 53 that took place in the Workhouse. Excluding the 53 Workhouse deaths this gives a death-rate for the year of 20.18 per 1,000, which is higher than that of the previous year but lower than that for 1891; the death-rates for these years being, for 1891, 24.05; and for 1892, 17.5 per 1,000. Of the 329 deaths 197 occurred in Chowbent, which gives a death-rate of 21.41 per 1,000; 54 occurred in Hindsford, which gives a death-rate of 19.28 per 1,000; 36 occurred in Leigh End, which gives a death-rate of 14.4 per 1,000; and 42 occurred in Howebridge, which gives a death-rate of 23.3 per 1,000 of the population, respectively.

Causes of Death.—The causes of death during the year, excluding those due to the seven principal zymotic diseases, were:—Influenza, 7; Phthisis, 26; Pneumonia, 20; Bronchitis, 40; other Pulmonary diseases, 27; Croup, 1; Puerperal Fever, 1; Heart Diseases, 12; other causes, 164. In the latter are included 8 deaths due to accident and 1 to suicide.

Influenza.—Your district was visited again this year by an epidemic of Influenza, and although one death was registered as having occurred from this disease in each of the months of February, April, and September, yet the epidemic attained its maximum intensity during November and December, causing two deaths in each of those two months, making 7 in all for the year. The epidemic was more widespread and general than that of the previous year when only two deaths resulted therefrom. It also increased the death-rate from pulmonary diseases during November and December.

Phthisis.—During the year 26 deaths resulted from Phthisis, 6 of which occurred in the workhouse. Excluding the deaths in the workhouse, the death-rate from this cause for the year was 1.22 per 1,000, which is in excess of that of the previous year, but below that of 1891; the death rates being for 1891, 1.64; and for 1892, 1.0 per 1,000 respectively. The deaths were distributed over the district as follows:—In Chowbent 14, in Hindsford 5, and in Leigh End of district 1.

Respiratory Diseases.—During the year 87 deaths were registered as having resulted from diseases of the Respiratory Organs. Of these 13 took place in the workhouse, excluding which there was a death-rate of 4.23 per 1,000, which is only slightly above that of 1892, when the death-rate from these causes was 4.12 per 1,000. Of the above deaths 39 occurred in Chowbent, giving a death-rate of 4.23; 11 in Hindsford, giving a death-rate of 3.92; 6 in Leigh End, giving a death-rate of 2.4; and 13 in

Howebridge, giving a death-rate of 7.2 per 1,000 respectively. During December alone 21 deaths occurred from pulmonary diseases, this being the largest number of deaths resulting therefrom in any one month of the year. During November 10 deaths occurred from the same causes. The mortality from Respiratory diseases in the two latter months was, I believe, increased by the epidemic of Influenza then prevalent in the district. Also during January, April, May, and June, the death-rate from these diseases was considerable.

Puerperal Fever.—Four cases of this disease occurred in the district during the year, one of which ended fatally. The house in each case was visited by the Sanitary Inspector and myself, and subsequently disinfected. The nurses in attendance were ordered to thoroughly disinfect their clothes and person and forbidden to attend any further cases for at least a month after their last exposure to infection.

Membranous Croup.—Four cases of this disease were reported during the year, of which one only ended fatally. Each house was visited and disinfected.

Erysipelas.—This disease was not so prevalent in the district as during the previous year. Fourteen cases were reported as against 23 during 1892. One case ended fatally.

Zymotic Death-rate.—The seven principal zymotic diseases caused 81 deaths in the district (exclusive of the Workhouse) during the year, giving a death-rate of 4.96 per 1,000, rather more than double that of the previous year, but a little lower than that for 1891 when this death-rate was 5.25 per 1,000.

The following table shews the number of deaths resulting from each of the zymotic diseases during the year, and for comparison the numbers for the three previous years are also given:—

Disease.	1893.	1890.	1891.	1892.
Smallpox	Nil	Nil	Nil	Nil
Scarlet Fever	12	11	17	3
Diphtheria	Nil	2	2	2
Whooping Cough	1	4	11	10
Diarrhoea	48	20	6	13
Typhoid Fever	6	3	2	7
Measles	14	Nil	44	1
Totals	81	40	82	36

Of the above 81 deaths 42 occurred in Chowbent, giving a death-rate of 4.56; 17 occurred in Hindsford, giving a death-rate of 6.07; 8 occurred in Leigh End, giving a death-rate of 3.2; and 14 occurred in Howebridge, giving a death-rate of 7.7 per 1,000 respectively.

The next table will show how the deaths arising from the seven zymotic diseases were distributed amongst the four divisions of the district:—

	Smallpox	Scarlet Fever	Whooping Cough	Diphtheria	Diarrhoea	Typhoid Fever	Measles	Totals
Chowbent	Nil	7	Nil	Nil	29	2	4	42
Hindsford	Nil	2	Nil	Nil	10	2	3	17
Howebridge	Nil	2	Nil	Nil	4	2	6	14
Leigh End	Nil	1	1	Nil	5	Nil	1	8
	Nil	12	1	Nil	48	6	14	81

Smallpox.—There were three cases of smallpox in your district during the year. One broke out in

January, another in February, and the third in June. The infection in the first two cases undoubtedly came from that which occurred in Market-street in December of the previous year. These patients were each isolated in their own house, all others leaving except the person in attendance as nurse in each case. The cases were kept under supervision, disinfectants were freely and systematically used and the houses thoroughly fumigated, cleansed, and disinfected after the termination of each case. The third case occurred in Leigh End; the patient was a man, and he caught the infection while at his employment owing to having been in company with a man who was infected with the disease. The case was at once sent to the smallpox hospital of the Bolton Rural Sanitary Authority, and maintained there at a cost to the Board of £46 4s. The remaining occupants of the house were removed to the Board's cottage at Alston Mill, while the house and premises were thoroughly fumigated and disinfected.

Scarlet Fever.—This disease was prevalent in the district throughout the year, there being in all 169 cases notified. The cases reported during the first three months of the year were confined to Chowbent and Leigh End of the district. In the former they kept cropping up here and there during that time, and, in fact, throughout the year. In a few cases I was able to trace direct infection from one case to another. Hindsford was quite free until the beginning of May, when the first case was reported there. No further cases, however, occurred till June, during which month six were notified. A few further cases occurred during July and August, but during September the disease reached its maximum intensity, when 13 cases were reported. Subsequently to this the disease gradually abated. The first case of scarlet fever in Howebridge was notified on July 18th. The disease spread gradually at first, but very quickly in August and September, during which months the epidemic assumed its maximum proportions. I made a special report upon this epidemic, which was presented to your Board in October last.

The disease spread, especially in Howebridge, at the commencement of the epidemic through children returning to school from infected houses before they were free from infection. In consequence of this a notice was sent to all the schools in the district calling attention to this fact, and requesting the teachers not to allow any child to attend school from an infected house until a medical certificate was produced, stating that such child or children were free from infection. During the coal strike the crowds assembling at the various soup kitchens were found to be a source of danger, several cases being traced to that origin, efforts were made however to minimise this danger as much as possible.

Owing to the spread of the epidemic a nurse was procured, on the 14th of September, to attend to the cases of scarlet fever. She was in the district for eleven weeks, and I found her services of great use, for we were thereby enabled to keep the cases under more strict supervision, maintain better isolation, and secure more prompt disinfection of houses, beds, &c., at the termination of the cases. The cost to the Board for the nurse's services was about £25. Scarlet fever caused 12 deaths during the year in the district, which gives a death rate of 0·73 for the year as compared with a death rate of 0·18 per 1000 for 1892. It also gives a mortality of 7·1 per cent of those attacked, which also is in excess of that of last year, when the case mortality was 6·25 percent.

Diphtheria.—Your district remained free from this disease throughout the year, not a single case having been reported.

Whooping Cough.—Your district was also practically free from this disease during the year, only one death resulted therefrom, and that occurred in Leigh End.

Diarrhoea.—This disease was very prevalent in the district during the summer and caused a heavy mortality. In fact the high zymotic death-rate was mainly due to deaths from diarrhoea, 48 deaths having been registered as due to this cause alone. This number in itself considerably exceeds the total number of deaths from all the seven principal zymotic diseases in the previous year. The heaviest mortality occurred in the months of July and September. The death-rate for the year from this disease was 2·94 per 1000. Of the above 48 deaths 29 occurred in Chowbent, giving a death-rate of 3·1; 10 in Hindsford, giving a death-rate of 3·5; five in Leigh End, giving a death-rate of 2·0; and four in Howebridge, giving a death-rate of 2·2 per 1000 respectively.

As to the cause of this disease. The past summer was a remarkable one, not only on account of its length, but as having been the hottest and driest within recent years, and this kind of weather brings about the conditions favourable to the production and development of summer diarrhoea. It has been observed that the temperature of the soil is intimately connected with the outbreak of diarrhoea and that the summer rise in the mortality of this disease does not begin until the soil at the depth of four feet has attained the mean temperature of about 56° F. as shown by the four foot earth thermometer. Improper feeding is also an undoubted and fruitful cause of diarrhoea. It is possible that the coal strike influenced this cause during its existence. Food of an improper kind, milk unboiled, over ripe fruit, inattention and want of cleanliness especially where the feeding bottle is used are causes of the disease. These things require strict attention at all times, but more especially so during a hot summer. That such is the case is borne out by the fact that children fed at the breast are exceptionally free from the disease.

Measles.—Cases of measles occurred in your district in September and October, but in November the disease assumed an epidemic form, which increased in intensity during December. Measles caused 14 deaths, which gives a death-rate for the year of 0·85 per 1000. This disease is looked upon as trivial, and that their children should have it is generally, I believe, regarded by parents as a matter of course. Medical attendance in the majority of cases is only called in when complications arise, children suffering from the disease are allowed to mingle with the healthy and return to school before they are free from infection. As a consequence an epidemic runs its course practically speaking unchecked, and gives rise to a death-rate which shows no signs of declining as is the case with scarlet fever, small-pox, &c.

Fever (including typhoid and continued).—Forty-nine cases of fever were reported during the year, resulting in six deaths (exclusive of the Workhouse). This gives a death-rate of 0·36, and a case mortality of 12·2 per cent. of those attacked. The death-rate is practically the same as that of the previous year, but the case mortality is only a third of what it was during 1892. Seeing that the disease was so prevalent, the low death-rate and small case mortality for the year are both satisfactory. The disease broke out in the third week in July, and continued to do so till the second week in August. It recommenced during the first week in September, and reached its highest point of attack in the third week of that month. A considerable number of fresh cases occurred also during October and November.

Howebridge suffered most from the disease, 28 of the cases occurring there. I made a special enquiry into this outbreak, the result of which was embodied in a report presented to your Board in October last.

In Chowbent 12 cases were reported, two of which ended fatally. In Hindsford eight cases were notified, two of which died. Leigh End was almost exempt from the disease, only one case having occurred there. Each house in which the disease occurred was visited by myself, the premises thoroughly examined, and the cause of the epidemic inquired into. The milk supply was found to have no relationship to the cause of the disease. In several cases the middens were situated near the house, and complaints were made of offensive smells arising therefrom. I also found several insanitary traps, and in one or two cases discovered defective drains. These imperfections were at once remedied. A nurse was procured to attend upon the cases, and was retained in the district for eleven weeks at a cost to the Board of about £25. Pails were obtained, one being left at each infected house, containing a solution of bi-chloride of mercury for the reception of the excreta. They were regularly and systematically removed and their contents destroyed. The middens also were well cleaned out and thoroughly disinfected.

Infant Mortality.—During the year 109 deaths occurred of infants under one year of age. This gives a proportion of 166 deaths to 1,000 births registered, a mortality which is considerably in excess of that of 1892, when the proportion was 125 deaths to 1,000 births. The high death-rate from diarrhoea among infants accounts for this rise in the infant mortality for the year. The causes of death among the infants during the year were—Bronchitis 11, pneumonia 1, broncho-pneumonia 3, tubercular diseases 4, dentition and convulsions 12, premature birth 11, diarrhoea 36, whooping cough 1, scarlet fever 1, measles 4, overlain and suffocated 1, other causes 24.

In the next table the different death rates of the four divisions of the district are compared:—

	General	Zymotic	Phthisis	Respiratory Diseases
Chowbent ...	21'41	4'56	1'52	4'23
Hindsford ...	19'28	6'07	1'78	3'92
Howebridge ...	23'3	7'7	0'0	7'2
Leigh End ...	14'4	3'2	0'4	2'4

The rise in the death-rate of Chowbent for the year is owing to the increase in the zymotic death-rate, which again is due to the increased mortality from diarrhoea and measles. The rise in the Hindsford death-rates is also chiefly due to the same causes. The death-rates in Leigh End as shown above are again the lowest except in one case, and must be considered satisfactory, but the death-rates in Howebridge are excessively high. From the position and surroundings of Howebridge it should have the lowest, whereas it actually has the highest death-rates (except phthisis) of all the divisions of the district. It is true that Howebridge has suffered from severe epidemics of scarlet and typhoid fever, and measles, but even these do not appear to be sufficient to altogether account for the high rate of mortality. The death-rate from respiratory diseases was very high.

Notification of Infectious Diseases.—During the year 243 cases of infectious diseases were notified in the district under the Act, a number very much in excess of that of the previous year. The infected houses were all visited, the origin of the disease inquired into, and the sanitary condition of the premises examined both by the Sanitary Inspector and myself. Isolation has been maintained as well as possible, and disinfectants freely supplied. Under section 14 of the Infectious Diseases (Prevention) Act, 112 notices were served during the year.

The following table shows the number of cases of each disease notified, and for comparison the number for the two previous years are given :—

Diseases.	No. Notified in 1893.	No. Notified in 1891.	No. Notified in 1892.
Smallpox	3	Nil	1
Scarlet Fever ..	169	157	48
Diphtheria	Nil	6	4
Typhoid Fever ..	47	19	16
Continued Fever ..	2	15	3
Erysipelas	14	25	23
Croup	4	10	3
Puerperal Fever ..	4	2	1
Totals	243	234	99

The next table shows the distribution of the cases notified amongst the four divisions of the district :—

Diseases.	No. Notified in Chowbent	No. Notified in Hindsford	No. Notified in Howebridge	No. Notified in Leigh End
Smallpox.....	2	Nil	Nil	1
Scarlet Fever...	67	48	48	6
Diphtheria	Nil	Nil	Nil	Nil
Typhoid Fever ..	11	7	28	1
Continued Fever ..	1	1	Nil	Nil
Erysipelas.....	6	5	3	Nil
Croup (memb)...	1	2	1	Nil
Puerperal Fever ..	2	Nil	2	Nil
Totals.....	90	63	82	8

As will be seen by the above table Howebridge had by far the largest number of infectious cases in proportion to its population. Hindsford stands next, then comes Chowbent, and Leigh End had again the least number of all in proportion to its inhabitants.

Infectious Hospital and Isolation.—The district is not yet provided with an infectious diseases hospital, but a Joint Hospital Scheme has been adopted by the four Sanitary Authorities in the Leigh Union for the purchase of Astley Hall, which is to be converted into an infectious hospital for the use of the combined districts. It is impossible to obtain perfect isolation in ordinary houses, and until we are furnished with an hospital and means provided whereby we can secure prompt removal thither of the first cases of infectious disease which happen to break out in the district, we are practically powerless in attempting to arrest such disease and prevent an epidemic. The sporadic cases cropping up here and there sow the seeds of an epidemic; hence the only successful means of averting the latter is to remove these cases without delay to a properly constituted hospital and retain them there until they are perfectly free from infection.

Disinfection.—A large amount of work has been done in the way of disinfecting houses and premises owing to the epidemics of scarlet and typhoid fever. During the year 155 houses have been

fumigated with sulphur, and 181 houses and premises otherwise disinfected. The disinfecting chamber has very frequently been called into requisition, 133 beds having been disinfected therein. Six beds have been burned. The Schools at Hindsford and Howebridge were fumigated with sulphur every week for three months, during the continuance of the scarlet fever epidemic, all the schools were limewashed during the year.

Sanitary Work.—I called the Board's attention to the insanitary condition of an ashpit belonging to a house in Market Street, in which a death from typhoid fever occurred, and the nuisance was abated. I reported the condition of two closets and ashpit in Lord Street, from which the liquid filth was percolating through the wall into the next yard. The nuisance was at once attended to and remedied. A similar nuisance was reported in Sanderson Street which was also promptly abated. The Board's attention was directed to the existence of a dangerous nuisance in a back yard in Leigh Road, Howebridge. I found the drain blocked and a pool of stinking water standing in the yard. There was also in the same yard a urinal situated behind a public-house, to which it belonged, two sides of which were formed by the walls of the house. The drain was situated close by the house wall, and the floor was flagged and not at all watertight. The consequence was the drainage from this urinal soaked into the ground, and into the foundations of the house also. Two cases of Typhoid Fever occurred in this house. The owners were communicated with, the result being the drain in the yard was made good; the drain was removed to the other side of the urinal, and the whole interior thereof cemented and made thoroughly watertight. The Sanitary Inspector during the year has reported 51 nuisances, consisting of structural alterations to ashpits, closets, drains, traps, and waste waterpipes. Notices were served upon the owners and in each case they have been attended to. One house was condemned during the year as being unfit for habitation, and the landlord, on learning that such was the case, permanently closed it. Some 300 special visits have been paid by me during the year in the district in connection with my Public Health work.

Bakehouses.—Accompanied by the Sanitary Inspector I have visited all the bakehouses in the district. With the exception of a bakehouse situated off West Street, which was in a rather dirty state and badly required limewashing, we found them to be in a clean and satisfactory condition. The one in West Street was ordered to be limewashed, which was afterwards done.

Lodging-houses.—There are only two common lodging-houses in the district, both of which I have visited. They were both clean and well-kept, but the ventilation of the one situated in Flapper Fold-lane is not sufficiently well attended to.

Slaughter-houses.—The slaughter-houses have all been visited. The floors in two cases were found to be out of repair, and in three cases lime-washing was required, all of which have since been attended to. In one case the slaughter-house was dirty, the floor and walls out of repair—in fact, it was altogether in an insanitary state. Notice was served upon the occupier, requiring him to put the place into a proper sanitary condition, which has since been done. The rest were all found to be in a clean and satisfactory state.

Dairies, Cowsheds, and Milkshops.—The Dairies, Cowsheds, and Milkshops Order of 1885 has been enforced in the district, and they have all been visited by the Sanitary Inspector and myself. I made a special and detailed report upon their condition which was presented to your Board in July last. The cowsheds at two different farms were condemned as being unfit to be used as such, with the result that they are being re-built and converted into a more healthy state. Regulations under the order have been framed, and are ready for the sanction of the Local Government Board.

Scavenging, Disposal of Nightsoil and House Refuse.—The public streets have been regularly swept and the sweepings removed by the Board's own men. The Board also removes the nightsoil and house refuse at the expense of the rates, which is found to be a more satisfactory method of procedure than when the farmers were depended upon to do this work. Many of the ashpits are near the housea, and very few are watertight, so that their contents percolate through into the soil, and pollute the ground in the vicinity of the houses. Such soil undoubtedly offers a fitting nidus for the reception of the poison of typhoid fever, and when that poison finds its way thither it assumes an active condition whenever favourable conditions arise. Ashpits also, during and after rain in warm weather, give off very noxious effluvia, of which I have heard frequent complaints during the year. I

would be a great improvement were even only those closets which are so near the houses converted into water closets, for it appears to me that so long as the midden system prevails we are unlikely to attain to a high standard of public health. The waste water automatic flushing closets, which have been introduced into the district, continue to work satisfactorily. Some 80 have been constructed during the year, including several which have been substituted for the old form of closet. There are now about 180 of these closets in the district. From inquiries I have made I find they are very much preferred, by those who use them, to the old form of midden closet, and from my experience of them they appear to me to be a form of closet very suitable in every way to cottages and small houses.

Sewage and Drainage.—The sewers continue in a good condition. The manholes have been regularly attended to and kept clean, and the sewers systematically flushed by means of automatic flushing chambers. A new flushing chamber has been constructed in Leigh-road, so that there are now seven such tanks in the district, two of which flush with the sewage, and the rest with water out of the street mains. The quantity so used during 1893 was 1,618,400 gallons costing about £40.

Repeated complaints having been made of offensive smells arising from the manholes along Leigh-road through Howehridge I conducted an experimental enquiry with a view of testing the movement of the air in Market-street and Leigh-road sewer. The result of those experiments together with my recommendations thereon were included in a special report presented to your Board in November last. Steps are being taken to improve the ventilation of the sewer at Howehridge.

The sewage continues to be treated at Hindsford and the Glass House Works, but negotiations were opened in November last with the Leigh Board, on the subject of a joint sewage disposal arrangement, with the result that it has been decided that the Leigh sewage farm shall be purchased by a joint committee, for the purpose of dealing with the sewage of the districts of Leigh and Atherton.

Water Supply.—Notwithstanding the protracted drought of last summer the district had a constant supply of water of good quality throughout the year.

While inspecting the cow-sheds, dairies, &c., I found that nine farms and dairies obtained their water from sources other than the town supply. I have analysed samples from six of these farms, and my report thereon will be shortly presented to your Board.

I have in conclusion, gentlemen, to acknowledge the help of the Surveyor and Sanitary Inspector, both of whom have rendered me valuable assistance during the year.

I am, gentlemen,

Your obedient servant,

JAS. T. NEECH, D.S.Sc., Vict., L.R.C.P., Ed.

Medical Officer of Health.

March 3rd, 1894.